

CAI
IAI
-C52

World Development
and Research
Government
Publication

COMPACT FACTS

CANADA

1980

3 1761 11556271 2



*Canada National Development
Bureau*

COMPACT FACTS

CANADA

1930

(Fourth Edition)

CAI

IAI

-C52



Department of the Interior

Hon. Thomas G. Murphy
Minister

W. W. Cory, C.M.G.
Deputy Minister

Issued by

National Development Bureau

F. C. C. Lynch, Director

CANADA'S GROWTH

Figures below show the striking increase in wealth, trade and manufacture within the present century. By the development of native resources since Confederation (1867) Canada is now a weighty factor in world commerce and has risen from the status of a colonial dependency to be an acknowledged national unit and to have an equal voice with any member of the British Commonwealth.

20th Century Progress

	1901	1929
Population.....	5,371,000	9,797,000
Agricultural wealth....	\$ 1,787,103,000	\$ 7,978,633,000
Occupied lands (acres)...	63,422,000	140,888,000 ₂
Field crops.....	\$ 194,953,000	\$ 979,750,000
Wheat (bus.).....	55,572,000	299,520,000
Dairy Products.....	\$ 66,471,000	\$ 297,625,000 ₃
Live Stock.....	\$ 268,651,000 ₄	\$ 864,167,000
Minerals.....	\$ 65,798,000	\$ 307,146,000
Coal.....	\$ 12,699,000	\$ 63,026,000
Dev. Water Power (H.P.)	236,000	5,727,000
Fisheries.....	\$ 25,737,000 ₄	\$ 55,051,000 ₃
Furs.....	\$ 900,000	\$ 18,758,000 ₃
Manufactures.....	\$ 481,053,000	\$ 3,769,847,000 ₃
Imports.....	\$ 177,931,000 ₅	\$ 1,298,993,000 ₅
Exports.....	\$ 177,431,000 ₆	\$ 1,182,412,000 ₆
Exports of:		
Wheat (bus.).....	9,740,000	210,946,000
Wheat flour.....	\$ 4,015,000	\$ 52,749,000
Newsprint paper.....	practically none	\$ 148,657,000
Wood pulp.....	\$ 1,937,000	\$ 43,577,000
Copper.....	\$ 2,659,000	\$ 37,400,000
Nickel.....	\$ 958,000	\$ 25,536,000
Asbestos.....	\$ 865,000	\$ 12,749,000
Steam railways (miles)	18,140	41,190
Bank deposits.....	\$ 349,573,000	\$ 2,468,504,000 ₇

1.—Or latest year available. 2.—1921 Census figures. 3.—1928 figures. 4.—1900 figures. 5.—Imports of merchandise for home use. 6.—Exports of domestic merchandise only. 7.—March, 1930.

Note:—Nearly all 1929 and 1930 figures, and a few of 1928, are preliminary and therefore subject to revision.

AGRICULTURE

Agriculture, including stock-raising and horticulture, is Canada's chief industry, employing about one-third the total gainfully occupied population.

Field Crops

Field crops provide 65 per cent of Canada's agricultural revenue. Acreage, 1929, 61,207,000; value, \$979,750,000; 1928, value, \$1,125,003,000.

Wheat—As a wheat-producing country Canada ranks third to United States and Russia, providing one-ninth of world supplies; is the world's largest exporter of wheat, and second largest (to U.S.A.) exporter of wheat flour.

The "Marquis" variety has proven most suitable for Canadian climate, now comprising three-quarters of total acreage. "Garnet" is a promising new, early ripening wheat.

	Area sown acres	Production bushels.	Per acre bushels.
1918.....	17,535,902	189,075,350	11.0
1923.....	21,886,146	474,199,000	21.7
*1928.....	24,119,140	566,726,000	23.5
1929.....	25,255,000	299,520,000	11.9

*Record year.

The Prairie Provinces, Manitoba, Saskatchewan and Alberta, produced in 1929, 276,664,000 bushels from 24,297,000 acres; 1928, 544,598,000 bushels from 23,158,505 acres.

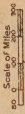
Oats—Crop of 1929 is estimated at 282,838,000 bushels from 12,479,000 acres, one-half grown in Prairie Provinces.

Barley—Yield, 1929, 102,313,000 bushels from 5,926,000 acres, four-fifths produced in Prairie Provinces; record year in 1928, 136,391,400 bushels.

	1928 bushels	1929 bushels
Other Grains:		
Rye.....	14,617,700	13,160,000
Peas.....	2,588,300	1,980,000
Beans.....	1,170,500	1,491,000
Buckwheat.....	10,899,300	10,470,000
Mixed grains.....	39,130,000	35,754,000
Flaxseed.....	3,614,400	2,060,000
Corn, husking.....	5,241,000	5,183,000

All grains, Canada.....	1,232,531,600	754,769,000
All grains, Prairie Provinces..	973,130,900	513,113,000

MAP OF THE
DOMINION OF CANADA
SHOWING
MAIN TYPES OF FARMING



AGRICULTURAL
REVENUE BY PROVINCES 1929

PRINCE EDWARD I.	\$ 26,723,000
NOVA SCOTIA	\$ 43,558,000
NEW BRUNSWICK	\$ 39,854,000
QUEBEC	\$ 325,422,000
ONTARIO	\$ 509,434,000
MANITOBA	\$ 134,095,000
SASKATCHEWAN	\$ 309,308,000
ALBERTA	\$ 228,669,000
BRITISH COLUMBIA	\$ 58,235,000



Prepared by
National Development Bureau
Dept. of the Interior
Ottawa, Canada

Elevators—Number of grain elevators, 1929-30, 5,787, capacity 394,594,000 bushels; over 40% of capacity served by Canadian National Railways and over 50% by the Canadian Pacific. There were 5,651 country elevators with an average capacity of 34,130 bushels.

Milling—Flour and grist mills numbered 1,319 in 1928 (423 flour and cereal mills, daily capacity, 120,855 bbls.); wheat milled, 94,820,000 bushels, flour produced, 20,390,000 bbls.; exports of wheat flour, 1929, 9,573,880 bbls., 1928, 10,737,266 bbls.

Wheat Pool—Co-operative marketing organization formed 1923-24; 140,000 members; handles over half prairie wheat crop; owns and operates 1,435 country elevators and 12 terminal. In crop year ending August, 1929, 253,103,000 bu. wheat and 35,694,054 bu. coarse grains were handled.

Root and Fodder Crops—Principal crops in order of value are—hay and clover, potatoes, grain hay, alfalfa, turnips and mangolds, fodder corn, and sugar beets; total value, 1929, \$333, 189, 000; exports of potatoes totalled 7,145,246 bu. (mainly to U.S. and Cuba); clover seed exports were valued at \$1,834,921.

Beets for Sugar—Grown for two factories in south-western Ontario and one in Alberta; acreage, 1929, 32,556; yield, 235,465 tons; sugar produced 69,399,000 lbs. Dried pulp is used for cattle feed.

Live Stock and Dairying

Dairying—Canadians now consume annually 29 lbs. butter and 3½ lbs. cheese per capita. Total value of dairy products, 1928, estimated at \$297,625,000; exports, \$36,230,617; 1929 output \$290,000,000; exports, \$28,398,549. There were 2,885 dairy factories in 1928 with products valued at \$144,544,000, including butter, 170,353,000 lbs., cheese, 143,690,000 lbs., dried milk products, \$10,226,000 worth and 6,170,000 gals. ice cream. By law all factory cheese and creamery butter is graded before export and officially inspected as to condition at Canadian and United Kingdom ports.

Quebec province holds the world's record for both butter and milk yield of a single cow. Dekol Plus Segis Dixie, a Holstein at Raymondale farm, Vaudreuil, in the year ending June 26, 1923, produced 33,529 lbs. of milk containing 1,384 lbs. of butter-fat.

Horses—Canadian horses carry off many of the highest prizes at United States shows. The demand is strong for definite types of horses needed for draught, police and military work. Horses on farms in 1929, 3,376,000, one-third in Saskatchewan.

Sheep and Wool—Sheep-raising in Canada is receiving impetus through sheep clubs which are establishing many new high

bred flocks on farms. In 1929, flocks totalled 3,731,000, estimated to yield 21,234,000 pounds of wool. The "Canadian Co-operative Wool Growers" grades and markets wool and handles a large proportion of the Canadian output.

Cattle—Canadian cattle totalled 8,931,000 in 1929; milch cows, 3,778,000; exports, 253,505 animals valued at \$13,959,982.

Swine—in 1929, 4,382,000.

Poultry—on farms, 1929, 60,900,000 (hens, 56,132,000); exports worth \$1,171,320. In 1926 a British Columbia hen (White Leghorn) laid 351 eggs in 365 days—the world's record in official egg-laying contests. The World's Poultry Congress was held at Ottawa in 1927.

Fruit and Vegetables

Fruit—Principal commercial fruits in order of importance are apples, grapes, strawberries, peaches, cherries, raspberries, plums and pears; value of production, 1928, \$19,824,000.

Exports of fruit in 1929 were valued at \$8,405,596 including 1,554,930 bbls. of apples worth \$6,902,357.

The chief fruit growing districts are Annapolis valley, N.S., Niagara Peninsula and borders of lakes Ontario and Erie, Ont., and the Okanagan Valley, B.C. Lists of fruits suitable for cultivation in each province supplied by the Department of Agriculture, Ottawa.

Packing Industry—The canning, drying or evaporating, and preserving of fruits and vegetables is a thriving industry, particularly in south-western Ontario, Quebec and British Columbia. Number of plants, 1928, 278, value of output, \$35,314,000.

Dehydration—The Federal Department of Agriculture is paying attention to dehydration, operating a laboratory plant at the Central Experimental Farm, Ottawa, and maintaining large scale experimental units at Grimsby, Ont., and Summerland, B.C. For plans of dehydration equipment write Fruit Branch, Department of Agriculture, Ottawa.

Tobacco—is grown in Ontario, Quebec and British Columbia; estimated production, 1929, 29,886,000 lbs. from 36,300 acres (Ontario 26,900 acres, 21,419,000 lbs.); imports of tobacco and products, \$7,709,414.

Maple Products—Output, 1929, 11,699,000 lbs. maple sugar and 2,174,000 gals. syrup; value, \$6,119,000; about 80 per cent comes from Quebec, remainder from Ontario and Maritimes.

Honey—The warm summers, abundance of white clover and wild flowers (especially fireweed and goldenrod) and large orchard

districts provide ideal conditions for honey production; output, 1929, 30,979,000 lbs.; value, \$3,403,000.

Fibre Flax—Of the 6,280 acres planted in 1929, 6,000, nearly all in Ontario, were converted into green tow. Record year 1920—31,300 acres planted.

Hemp—A bounty for 8 years from January, 1926, is extending the growing of hemp—1,730 acres in 1929, mainly in Ontario and Manitoba; fibre used for rope and twines.

Commercial Fertilizers—Consumption in Canada, 1928, \$9,790,493; imports, \$5,019,841; value available for field crops 16 cents per acre, as compared with from \$1.05 to \$13.00 in European countries. Preparations, involving expenditure of at least \$10,000,000, now under way for greatly increased production of fertilizers both in British Columbia and Eastern Canada.

Farm Lands (1921 Census)—Of the 358 million acres estimated fit for farming only 141 million are occupied and 71 million cultivated. Number of farms, 711,090, of which 86.5 per cent were occupied by the owner or manager.

Prairie Provinces (1926 Census)—The estimated available farm land in Manitoba, Saskatchewan and Alberta is 215 million acres of which approximately 89 million acres are occupied and 49 million cultivated.

Peace River Country—in N. Alberta and N.E. British Columbia is the last great agricultural belt of the Western Plains. Besides fertile land and favourable climate there are resources of timber, water power, coal, natural gas, gypsum, furs, fish and game. Railways, operated jointly by C.N.R. & C.P.R. are being extended; three world championships in wheat, one in oats and one in peas; 96 grain elevators; estimated population 60,000; an increase of over 7,000 land grant entries in last 2 years.

Irrigation—Ten major projects, costing 32 million dollars and covering 1,022,000 irrigable acres (260,000 acres irrigated) are now in operation in S. Alberta. A further 550,000 acres surveyed but not yet developed; water is available for irrigation of 3,000,000 acres in S. Alberta and S. Saskatchewan. Several small systems water valuable lands in S. British Columbia.

Drainage Projects—29 schemes, covering 2,240,000 acres, for the reclamation of fertile land in the Prairie Provinces have been found feasible by the Dominion government.

FORESTRY

Forests—Next to her wealth of arable lands, Canada's forests are her greatest natural resource. The total forest area is estimated to be 1,151,454 square miles. Preservation measures to conserve forests include fire prevention and control (by fire rangers aided by watch towers, aeroplane patrol and transportation, telephone and radio communication, power pumps, etc.), protection against pests, reforestation, strict protective legislation, educational propaganda and Dominion and Provincial reserves.

Forest Reserves—The Dominion Government administers 38 national forest reserves with a view to conserving the timber and water supply; area, 32,775 square miles. Provincial Governments of British Columbia, Ontario and Quebec maintain 26 provincial forest reserves; area, 33,545 square miles.

Forest Products

Merchantable Timber—Timber stand of merchantable size estimated at 224,304 million cubic feet, nearly 80 per cent coniferous. Spruce comprises 27 per cent of the total; poplar, 13 per cent; jack pine, 13 per cent; balsam fir, 12 per cent; cedar, 9 per cent; and Douglas fir, 7 per cent. Of the entire forest area, 90.4 per cent is still under public ownership.

Pulp and Paper—Canada's greatest manufacturing industry; production, 1928, valued at \$233,077,000; (1924, \$179,260,000) capital invested, \$685,687,000.

Pulpwood—Of 6,329,000 cords cut in 1928, over 20 per cent was exported to the United States in raw state.

Pulp—Production, 1928, 3,608,000 tons; value, \$121,184,000; exported, \$45,615,000; exports, 1929, \$43,577,000.

Paper—Canada manufactures more newsprint paper than any other country and exports more than all others combined. Production, 1928, 2,414,000 tons, worth \$144,147,000; 1929, 2,729,000 tons; exports, 1929, 2,511,000 tons, worth \$148,657,000.

Lumbering—One of Canada's oldest industries. Value of production of lumber, pulp wood, shingles, lath, sawn ties, box shooks, etc., from 2,533 mills, 1928, \$139,425,000; employees, 44,862; salaries and wages, \$34,722,000; principal species used, spruce, Douglas fir, white pine, cedar and hemlock.

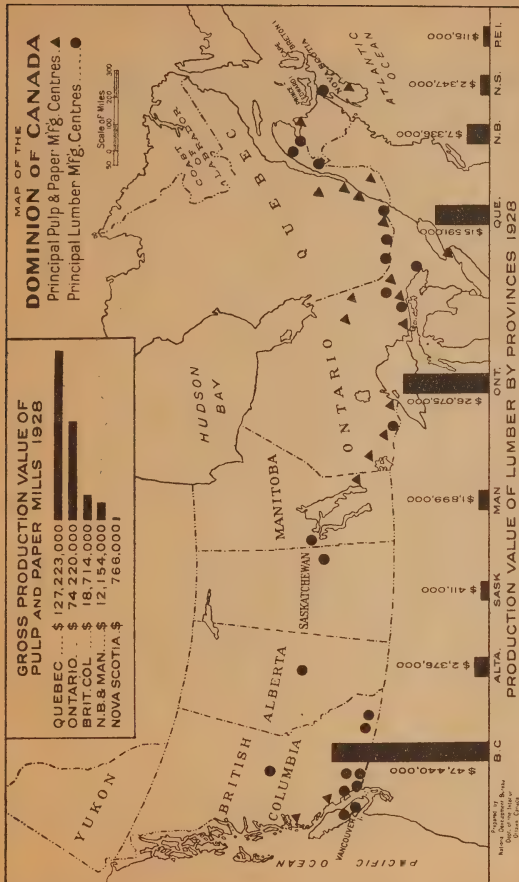
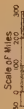
Wood Waste Utilization—Four plants, 3 in Quebec and 1 in Ontario, make insulating wall board from wood waste; output, 1929, 34,400,000 sq. feet (1926, 9,700,000 sq. ft.).

GROSS PRODUCTION VALUE OF PULP AND PAPER MILLS 1928

QUEBEC	\$ 127,223,000
ONTARIO	\$ 74,220,000
BRIT. COL.	\$ 18,714,000
N.B. & MAN.	\$ 12,154,000
NOVA SCOTIA	\$ 766,000

MAP OF THE DOMINION OF CANADA

Principal Pulp & Paper Mfg. Centres. ▲
Principal Lumber Mfg. Centres. ●



Prepared by
National Development Bank
Dept. of the Interior
Ottawa, Canada

PRODUCTION VALUE OF LUMBER BY PROVINCES 1928

ONT.

MAN

SASK

ALTA.

B.C.

QUE.

N.B.

N.S.

P.E.I.

Pulp and Paper Mills in Canada, December 31, 1929.

Province	Pulp Mills	Paper Mills	Pulp and Paper Mills
British Columbia.....	2	..	3
Manitoba.....	1
Ontario.....	10	18	19
Quebec.....	14	14	24
New Brunswick.....	3	..	2
Nova Scotia.....	6	..	1
Total.....	35	32	50

Artificial Silk—One plant in Ontario makes rayon by the viscose process from bleached sulphite pulp produced at Kipawa, Que. A plant in Quebec makes celanese by the cellulose acetate process from cotton linters. The Kipawa mill is producing approximately half the world's supply of pulp for rayon.

Wood Distillation—Maple, birch and beech are the principal hardwoods used in 5 distillation plants in 1928. Principal products are charcoal, wood alcohol, acetate of lime, acetic acid and formaldehyde.

Research—The Dominion Forest Products Laboratory is in Ottawa; branches at Vancouver and Montreal. The Pulp and Paper division was reorganized in Montreal in 1928 with the co-operation of McGill University and the Canadian Pulp and Paper Association. A model paper mill is in operation for the study of technical problems affecting the industry.

In silvicultural research the Dominion Forest Service maintains the Petawawa Forest Experimental station of 100 sq. mi. in Ontario and is engaged in a survey of reproduction and rate of growth in forests throughout Canada. The provinces of Quebec, Ontario and British Columbia also conduct silvicultural research.

MINERALS

Canada has already attained world prominence in the production of many of the chief minerals of commerce and possibilities are bright for still further advances. Mineral output has grown from \$10,221,000 in 1886 to \$274,989,000 in 1928;

1929 estimate \$307,146,000 (new high record). By the use of aeroplanes prospecting is extending far northward.

Cobalt—Over half the world's supply is obtained from silver-cobalt ores of Cobalt and adjoining areas in the Timiskaming district, Ontario. Output, 1929, 929,415 pounds worth \$1,802,000.

Copper—Record production, 1929, 248,108,000 pounds valued at \$43,411,000; British Columbia, 43 per cent; Ontario, 34 per cent; and Quebec the balance; 1928, 202,696,000 pounds worth \$28,598,000.

Large increases in future production presaged. Smelter under construction at Copper Cliff to treat large tonnage of copper-nickel ore from Frood mine, Sudbury district, Ontario; capacity of Noranda smelter at Rouyn, N. Quebec, (first poured copper Dec., 1927) doubled in 1929; large deposits of copper-zinc ore at Flin Flon and Sherritt Gordon, N.W. Manitoba and lead-copper-zinc ore in Sudbury Basin area, N. Ontario, under development; production increasing in B.C.; and many promising areas including Vancouver Island, Chibougamau and Opemiska under examination.

Gold—Canada now produces more gold than any country except South Africa and United States. Over 80 per cent of present output from Porcupine (Hollinger, Dome, McIntyre) and Kirkland Lake (Lake Shore, Teck Hughes, Wright-Hargreaves) areas of N. Ontario. Placer gold is mined in Yukon and British Columbia. Increasing amounts of gold are recovered in refining other metals.

Production, 1929, 1,927,000 oz. valued at \$39,841,000. In 1892 production was only 43,905 oz.

Iron—Deposits of ore are wide spread, but owing to economic reasons ore used in Canada's extensive iron and steel industry is imported; from U.S.A. (1929), 1,640,500 tons, Newfoundland, 744,000 tons and Sweden 59,000 tons. Recent legislation by the Ontario government may stimulate the development of large reserves in Michipicoten and other districts.

Lead—Production, 1929, 325,950,000 lbs.; value \$16,514,000; 1928, 337,947,000 lbs. (record); 90 per cent produced in British Columbia, the balance in Yukon, Quebec and Ontario.

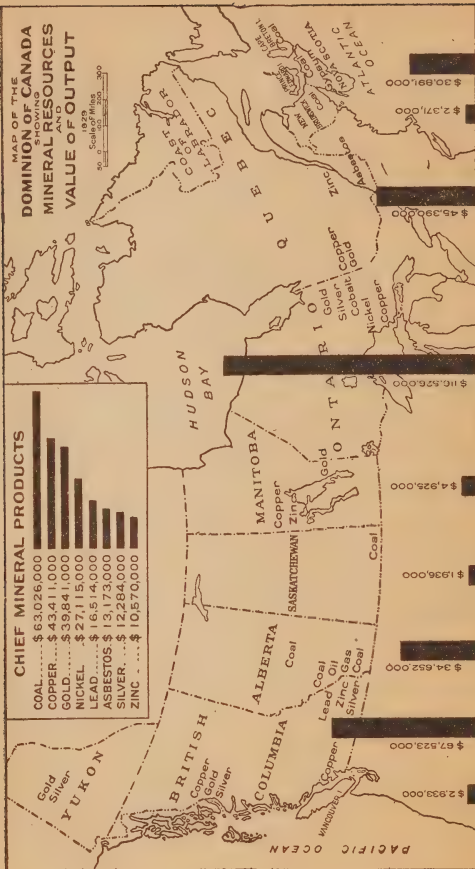
Nickel—Canada produces over 90 per cent of world's nickel. Ore reserves of the Sudbury district, Ontario, are capable of supplying world requirements for many years. All ore is smelted in vicinity of Sudbury; most of the matte refined at Port Colborne, Ontario, and Clydach, Wales; production, (record), 1929, 110,276,000 lbs.; value \$27,115,000.

Platinum Metals—Main sources of platinum, palladium, rhodium, etc., are nickel-copper ores of Ontario; development

MAP OF THE
DOMINION OF CANADA
SHOWING
MINERAL RESOURCES
AND
VALUE OF OUTPUT

1929
Scale of Miles
50 0 100 200 300

CHIEF MINERAL PRODUCTS



VALUE OF OUTPUT BY PROVINCES 1929

ONT.

MAN.

SASK.

ALTA.

B.C.

YUKON

N.B.

N.S.

Prepared by
Bureau of Statistics
Department of the Interior
Ottawa, Canada

of Frood ores will materially increase production. Output, 1929, \$1,062,000, of which platinum provided \$742,000.

Silver—Canada's present yield is exceeded only by that of Mexico, U.S.A. and Peru. It is obtained principally from silver-lead-zinc and silver-gold ores of British Columbia, silver-cobalt ores of Ontario, silver-lead ores of Yukon and lead-zinc-silver ores of Quebec. Considerable amounts are also obtained in refining gold, nickel, copper and other metals. Production 1929, 23,180,000 oz. worth \$12,284,000.

Zinc—Total production, 1929, 196,213,000 lbs. valued at \$10,570,000, mainly from British Columbia. Recent ore discoveries are widespread, including areas in British Columbia, N. Manitoba, N. Ontario, N.W. Quebec, Gaspé, and Nova Scotia.

Other metallics produced include arsenic, titaniferous iron sands, bismuth and cadmium, the latter two being newcomers to Canada's list of metals.

Non-Metallics

Asbestos—Canada still produces, from the great crysotile asbestos field in the Eastern Townships of Quebec, about 70 per cent of the world's supply. Principal competition comes from Rhodesia and South Africa. Production, 1929, 306,000 tons valued at \$13,173,000.

Coal—Canada possesses about 16 per cent of the world's coal reserves and the only two coal regions on the coasts of N. America. Nova Scotia, New Brunswick and British Columbia produce bituminous; Saskatchewan, lignite; Alberta, bituminous, sub-bituminous and lignite; lignite recently found in N. Ontario.

Production, 1929, 17,502,000 tons valued at \$63,026,000 (largest single item in mineral output); Nova Scotia, 7,064,000 tons, \$28,070,000; Alberta, 7,151,000 tons, \$22,896,000; British Columbia, 2,490,000 tons, \$10,161,000. Operating mines number about 500 with 30,000 employees. Owing to the dearth of hard coal for domestic fuel and the absence of coal in Ontario and Quebec imports are large; 1929, 18,204,163 tons worth \$56,013,000; from U.S.A. 17,243,047 tons valued at \$50,439,000. An effort is being made to market Alberta and Nova Scotia coal in Ontario and Quebec by special reductions in freight rates.

Coke—Output has increased 33 per cent in 2 years to a new record of 2,674,000 tons in 1929. Imports, 1929, 1,226,853 tons.

Gypsum—Extensive deposits are worked in Nova Scotia, Ontario, Manitoba, New Brunswick and British Columbia. Production, 1929, 1,211,000 tons, value \$3,339,000; 1928, 1,248,000 tons;

exports, mainly in crude form from Maritimes, 1929, 901,000 tons.

Natural Gas—Fields in Alberta, Ontario, and New Brunswick; over 1,000 wells in Ontario; widespread distribution in Alberta with several producing areas—including Turner Valley wet gas field from which in excess of 700,000 bbls. of naphtha were extracted in 1929. Production, 1929, 28,097,000 M. cu. ft.; value \$9,892,000; Alberta, 18,846,000 M. cu. ft.

Petroleum—Producing areas are in Alberta, Ontario and New Brunswick. Western Canada is the scene of intense activity in search for oil, centred in Turner Valley field of Alberta, where 39 wells are producing naphtha and crude oil and 58 wells are drilling.

Production, 1929, 1,121,000 bbls.; value \$3,790,000, (1923, 170,169 bbls.); imports of petroleum and products \$76,886,930.

Salt—Production, 1929, 330,000 tons, mainly from S.-W. Ontario. Rock salt is mined at Malagash, Nova Scotia.

Other Non-Metallics—Canada also yields her share of magnesite, feldspar, quartz, pyrites, talc, graphite, mica, iron oxides, fluorspar, grindstones, sodium sulphate, phosphate, etc.

Clay Products and Structural Materials—Brick, fireclay products, hollow blocks, tile, pottery, sewer pipe, etc., were produced to the value of \$13,222,000 in 1929. Cement totalled 12,284,000 bbls. worth \$19,339,000; lime, \$5,288,000; sand and gravel, \$6,892,000; and stone, \$11,290,000.

Mineral Industries—Active Operators—1928, 2345; capital employed \$841,968,000, employees 89,500, salaries and wages \$115,954,000, cost of fuel and electricity \$23,432,000.

METALLURGICAL PLANTS

Non-Ferrous

British Columbia—Trail, smelter and refinery (largest metallurgical plant in British Empire), products—refined lead, zinc, silver, copper, gold, cadmium and bismuth, also sulphuric acid from flue gas, and pyrites. Anyox, copper smelter.

Manitoba—Flin Flon, copper smelter and zinc refinery (under construction).

Ontario—Sudbury area, nickel-copper smelters at Coniston, Copper Cliff and Falconbridge, nickel refinery at Port Colborne, (sulphuric acid from flue gases at Coniston smelter); new nickel-copper smelter and copper refinery under construction at Copper Cliff. Deloro, smelter and refinery; products—refined silver, nickel and cobalt metal and salts, arsenic, etc. Galetta, lead smelter.

Quebec—Noranda, copper smelter. Shawinigan Falls, aluminum electrical reduction works; Arvida, aluminum electrical reduction works (bauxite from British Guiana) will be largest aluminum plant in world. Copper refinery under construction in Montreal E.

Non-ferrous Smelting and Refining Industry—Capital employed, 1928, \$120,036,000, employees, 7,500, salaries and wages \$12,229,000, income from sales \$61,080,000. Value of smelter products, \$94,342,000.

Ferrous

Ontario—Operating iron ore smelters at Sault Ste. Marie (4 furnaces 1,600 long tons per day); Port Colborne (1 furnace, 350 tons); Hamilton, (2 furnaces, 825 tons).

Nova Scotia—Sydney (4 furnaces, 1,400 tons).

Production—1929, pig iron, 1,090,000 long tons; steel, 1,310,000 tons ingots and 70,000 tons steel castings; ferro-alloys, 80,000 tons.

WATER POWER

Canada occupies an outstanding position in the field of hydro-electric development and utilization. Developed power has increased from 170,000 h.p. in 1900 to 5,727,000 h.p. at the end of 1929. In the past 8 years installations totalled over 2,970,000 h.p. New plants now under way will add initially 1,000,000 h.p. and finally about 3,270,000 h.p., while many existing plants are also being enlarged.

This power is of inestimable value in the development of industry especially in the non-coal producing provinces of Ontario and Quebec. It is estimated that each installed h.p. is capable of effecting a saving of $5\frac{1}{2}$ tons of coal per annum.

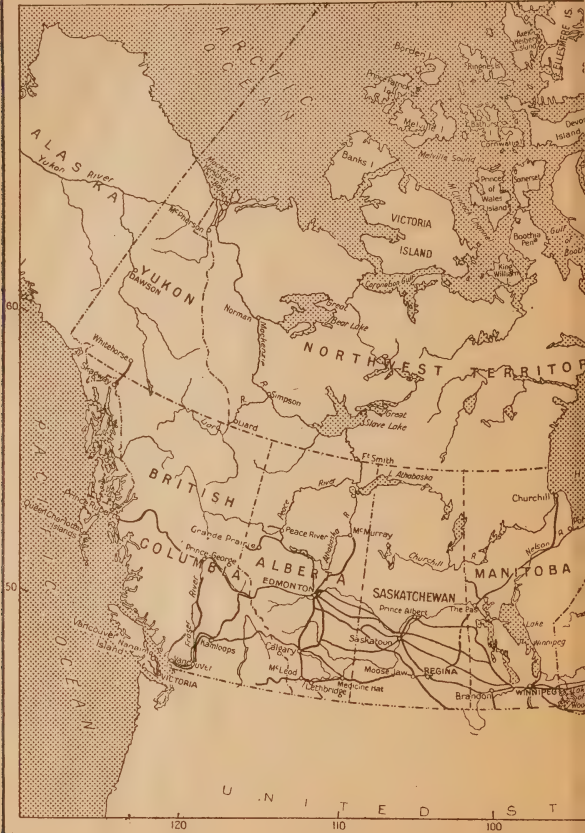
Potential Power—Canada's water power resources are only $13\frac{1}{2}$ per cent developed. As the actual water wheel installations average 30 per cent greater than corresponding available power figures as shown in column 2 above, present recorded resources will permit the installation of 43,700,000 h.p.

Utilization—The pulp and paper industry is the largest user consuming 1,440,000 h.p.; mineral industry, 500,000 h.p.

Hydro-Electric Power Commission of Ontario—The central administrative body and trustee for a partnership of municipalities, formed in 1906, to secure and distribute ample supplies of low-cost electrical power.

In 1929 it distributed 1,100,000 h.p.; supplied service to 608 municipalities, and had 4,600 miles of main transmission lines and 5,000 miles of rural primary lines. Capital invest-

160 150 140 130 120 110 100 90 80



120 110 100

MAP OF THE DOMINION OF CANADA

Scale of Miles
0 100 200 300 400 500

Principal Railways.....

Geographical features and locations labeled include: Baffin Bay, Davis Strait, Baffin Island, James Bay, Hudson Strait, Ungava Bay, Rigolet, Hamilton, Quebec, Montreal, Toronto, Windsor, St. John's, Halifax, and various rivers and lakes.

Provinces and Territories labeled include: ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, QUEBEC, NEW BRUNSWICK, NOVA SCOTIA, and NEWFOUNDLAND.

Prepared by
National Development Bureau
Dept. of the Interior
Ottawa, Canada

MAP OF THE DOMINION OF CANADA

Scale of Miles
0 100 200 300 400 500

Principal Railways.....

Geographical features and locations labeled include: Baffin Bay, Davis Strait, Baffin Island, James Bay, Hudson Strait, Ungava Bay, Fort George, James Bay, Albany, St. John's, New Brunswick, Nova Scotia, Prince Edward Island, Cape Breton, St. Lawrence, Gulf of St. Lawrence, Saguenay, St. John's, Fredericton, Saint John, Halifax, Sable Island, Atlantic Ocean, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, and various rivers and straits.

Prepared by
National Development Bureau
Dept. of the Interior
Ottawa, Canada

ment exceeds \$315,000,000, combined annual revenue \$37,000,000, reserves \$87,000,000.

Available and Developed Water Power by Provinces

	Available 24 hour horse power at 80% efficiency		Turbine Installation Jan. 1, 1930 H.P.
	At ordinary minimum flow H.P.	At ordinary six months flow H.P.	
	1	2	3
British Columbia.....	1,931,000	5,103,500	559,792
Alberta.....	390,000	1,049,500	70,532
Saskatchewan.....	542,000	1,082,000	35
Manitoba.....	3,309,000	5,344,500	311,925
Ontario.....	5,330,000	6,940,000	1,952,055
Quebec.....	8,459,000	13,064,000	2,595,430
New Brunswick.....	68,600	169,100	112,631
Nova Scotia.....	20,800	128,300	109,124
Prince Edward Island.	3,000	5,300	2,439
Yukon and Northwest Territories.....	294,000	731,000	13,199
Canada.....	20,347,400	33,617,200	5,727,162

NOTE.—The figures in columns 1 and 2 represent 24-hour power and are based on rapids, falls and power sites of which the actual drop or head of concentration is known. No account is taken here of innumerable rapids and falls, especially in northern areas nor of feasible sites for concentration of power by dams and reservoirs, if they are not yet matters of record resulting from detailed surveys or studies.

FISHERIES

Canada's fishing grounds are probably the most extensive in the world. They include over four-fifths the total grounds of N. Atlantic, embracing 5,000 miles of coastline, 7,180 miles of coast on N. Pacific, 6,000 miles on Hudson Bay and a vast area of inland lakes and rivers. Quality of fish taken in these cold waters is superlative.

Atlantic Fisheries—Production, 1928, 5,220,000 cwt.; value \$20,106,000; principal fish taken, cod, (\$6,284,000), lobsters, (\$5,184,000), haddock, smelts, 'sardines', and herring. There were 375 lobster canneries employing 5,800 people in 1928; largest 'sardine' cannery of its kind in the world in New Brunswick; shellfish included clams, quahaugs, scallops and oysters.

Pacific Fisheries—B.C. produces nearly half total Dominion catch; main item, 1928, salmon (\$17,346,000), followed by halibut (\$3,371,000), pilchards and herring; whales and seals are also taken; canned salmon exported to 25 countries; 1928, pack 2,036,000 cases, 334,000 to France.

Inland Fisheries—Canada's fresh water fisheries comprise an equal share, 36,352 sq. miles, in the waters of the Great Lakes (the largest of all fresh-water areas), Canadian lakes, 219 of which cover 120,924 sq. miles, and thousands of miles of river. Value of take, 1928, \$8,382,000 including whitefish, trout, pickerel, perch, tullibee, herring, and sturgeon.

Fishery By-Products—The chief recoveries are fish-meal, oil, fertilizer and glue. Pilchards (B.C.), herring and whales are the main sources of meal and oil. There is also a considerable cod liver oil industry on the Atlantic coast. Output of meal, oil, fertilizer, etc., valued at \$3,600,000 in 1928.

In 1928, 78,219 persons were engaged in the Canadian fishing industry; production \$55,051,000; capital invested \$58,072,000; exports (to 100 foreign markets) totalled \$38,096,245; exports, 1929, \$37,546,393; imports, \$4,236,450.

FURS

The taking of furs is Canada's oldest and most historic industry. During the season of 1927-28, over 400 years after Cabot first took furs from Canada to Henry VII, the 3,601,000 pelts marketed were valued at \$18,758,000, of which muskrat, silver fox, beaver, white fox, red fox, mink and marten in the order named made up 69 per cent. Most valuable pelts were silver fox averaging \$101.25 followed by cross fox \$70.06 and blue fox \$64.23. Montreal, Winnipeg and Edmonton are important marketing centres.

Dressing and dyeing of furs is a growing industry; 7,974,000 skins treated in 1928 as against 4,190,351 in 1925.

Fur Farming—A rapidly increasing industry in Canada; number of farms increased 252 per cent in 5 years to reach 4,371 in 1928. Of these, 3,676 were fox, remainder muskrat, beaver, mink, raccoon, marten, fisher, etc.; live animals sold valued at \$3,760,000 including silver fox, \$3,476,000; pelts sold were valued at \$2,346,000.

RECREATIONAL RESOURCES

National Parks of Canada—Twenty in number, and covering an area of 13,816 square miles, the National Parks are sanctuaries for wild fowl, deer, mountain sheep and goat, moose, elk, bear, and buffalo, and a tourist wonderland of forest, streams, and lakes; glaciers, hot springs, waterfalls and mountains, all accessible by motor road or railway.

The principal scenic parks include Rocky Mountains, Jasper, and Waterton Lakes in Alberta; Yoho, Glacier, Kootenay and Mount Revelstoke in British Columbia; St. Lawrence Islands, Georgian Bay Islands, and Point Pelee in Ontario; Prince Albert Park (1,867 sq. miles) in Saskatchewan; Riding Mountain Park in Manitoba (created Dec. 1929) and Fort Anne in Nova Scotia.

Animal reserves are Buffalo, Elk Island, and Nemiskam (Antelope) in Alberta.

Game and bird sanctuaries have been set aside by the provinces and by the Dominion Government. The Dominion sanctuaries are largely for the protection of sea-birds and to provide nesting places for water-fowl. One of the most spectacular sea-bird sanctuaries is at Bonaventure Island, Quebec, in the Gulf of St. Lawrence.

Historic Sites—Among the most outstanding of these are:—Louisbourg Fortress, N.S.; Fort Beauséjour, N.B.; Fort Chambly, Fort Lennox, Quebec Citadel, Fortifications and Battlefields, P.Q.; Fort Wellington, Fort Henry, Fort Missassauga, Ontario; Fort Langley, B.C., and Fort Prince of Wales, N.W.T.

An honorary Historic Sites and Monuments Board advises the Department of the Interior respecting all historic sites matters, and on its recommendation, control of 163 sites of national importance has been obtained. Memorials have been erected on most of these and where buildings exist the necessary action taken to ensure of their preservation

Tourists—Favoured summer resorts are the Bras d'Or lakes (Cape Breton), the south coast of Nova Scotia and the Bay of Fundy, Prince Edward Island and the Gaspé peninsula, the St. Lawrence and Saguenay rivers, the Laurentian mountains, Georgian bay and Muskoka lakes, Algonquin park, Lake

of Bays district, Nipigon and Lake of the Woods districts, Rideau and Kawartha lakes, the Rocky and Selkirk mountains and South Vancouver island. A favourite trip is by steamer up the Pacific coast to the Yukon. Tourists are reputed to have spent 300 million dollars in Canada during 1929.

Sport—Dominion and provinces unite in keeping their vast game preserves well stocked. Moose, elk, caribou, deer, mountain sheep and goat, and bear are found in abundance, as are also geese, ducks, quail, woodcock, snipe, grouse and pheasants. The chief sport fish taken inland are salmon, trout, bass, pike and maskinonge; off the coasts, salmon, tuna and swordfish.

Buffalo—The buffalo in Wood Buffalo Park, near Fort Smith, N.W.T., south of Great Slave Lake are now estimated to number approximately 10,500 head; in Buffalo National Park near Wainwright, Alta., over 5,000 head; in Elk Island National Park, 37 miles east of Edmonton, Alta., over 700 head and in Banff National Park 22 head. Wood Buffalo reserve, administered by the North West Territories and Yukon Branch, Department of the Interior, has, including summer and winter ranges, an area of 17,300 square miles. Buffalo Park, the largest wild animal enclosure in the world, covers 198 square miles.

Musk-Ox—This animal, which at one time roamed over the greater part of the northern half of the continent, has now been almost exterminated on the mainland. A herd comprising about 250 animals still exists in the district to the east of Great Slave Lake, N.W.T. The habitat of this herd is now included in the Thelon Game Sanctuary. This animal survives in considerable numbers on some of the Arctic Islands and is now fully protected under Dominion Government regulations. The most recent estimates place the number of musk-oxen in the Canadian North between 10,000 and 13,000.

Reindeer—The investigation made by the Government into the possibilities of reindeer grazing in the Arctic and sub-Arctic regions indicates that there are vast areas suitable for this purpose. The Department of the Interior has agreed to purchase a herd of 3,000 reindeer in Alaska. This herd is being driven overland and is expected to arrive at the mouth of the Mackenzie river in the spring of 1931. The area selected for the initial experiment lies east of the Mackenzie Delta, N.W.T. The establishment of reindeer herds in Northern Canada is to provide a new source of food and clothing for the native inhabitants.

MANUFACTURING

Canada, with an industrial development wisely based on agricultural, forest, mineral and water power resources, is the second largest manufacturing country in the British Empire.

VALUE OF PRODUCTION OF LEADING MANUFACTURING INDUSTRIES 1928

PULP AND PAPER	\$ 233,077,000
FLOUR & GRIST-MILL PRODUCTS	\$ 195,698,000
SLAUGHTERING & MEAT-PACKING	\$ 174,096,000
AUTOMOBILES	\$ 162,867,000
CENTRAL ELEC. STATIONS	\$ 143,692,000
SAWMILLS	\$ 139,425,000
BUTTER AND CHEESE	\$ 130,212,000
RUBBER GOODS	\$ 97,209,000
NON-FERR. METAL SMELTING	\$ 94,342,000
ELEC. APPARATUS & SUPPLIES	\$ 93,672,000

Manufacturing Industries, 1928

Products	No. of Plants	Capital Invested Thousand \$	Gross Value of Products Thousand \$
Vegetable.....	4,845	531,919	756,996
Animal.....	4,542	243,550	485,022
Textile.....	1,885	365,722	415,402
Wood and Paper.....	7,290	1,158,651	682,547
Iron.....	1,159	702,931	609,633
Non-Ferrous Metal....	406	253,367	237,967
Non-Metallic Mineral.	1,178	298,693	206,082
Chemical.....	572	148,940	146,976
Miscellaneous.....	453	119,603	85,530
Cen. Electric Stations.	1,049	956,920	143,692
Total.....	23,379	4,780,296	3,769,847

The value of raw and partly manufactured materials used was \$1,950,804,000; employees numbered 658,000; salaries

and wages \$755,366,000. The gross value of products by provinces was Ontario \$1,949,724,000. Quebec, \$1,073,162,000, British Columbia \$270,852,000, Manitoba \$159,435,000, Alberta \$100,744,000, Nova Scotia \$84,949,000, New Brunswick \$67,411,000, Saskatchewan \$59,125,000 and Prince Edward Island \$4,445,000.

Chemical Industries

Wide range of products including acids, alkalies, compressed gases, explosives, matches, ammunition, coal tar products, paints and varnishes, fertilizers, soaps, toilet preparations, medicinal and pharmaceutical preparations, inks, dyes and colours. Value of production, 1929, \$168,599,000, (1927, \$127,485,000); capital invested in the 549 plants amounted to \$172,375,000.

Electro-Chemicals—Cheap and plentiful hydro-electric power has made such places as Shawinigan Falls, Quebec, and Niagara Falls, Ont., electro-chemical centres for the manufacture of calcium carbide, acetylene gas, acetic acid, carborundum, carbon electrodes, calcium cyanamide, etc.

Nitrogen Fixation—A Casale plant has been installed at Sandwich, Ont., and other fixation plants are in prospect. A plant at Niagara Falls has for many years been the only producer. The waterpower, coal and lime of Canada can meet any war-time need of fixed nitrogen or can contribute it to the world's trade when economically desirable.

BUILDING

Construction contracts awarded in Canada in 1929 reached new record figure of \$576,652,000 (\$276,261,000 in 1924), of which \$128,901,000 was residential, \$190,162,000 business buildings, \$62,969,000 industrial buildings, and \$194,620,000 engineering projects; 70 per cent of contracts in Ontario and Quebec.

EXTERNAL TRADE

1918 (peak of war-time production) credit balance of \$623,626,000.

1927—Canada led all nations in favourable trade balance per capita.

1928—Favourable balance of \$151,812,000.

1929—Unfavourable balance of \$90,655,000 (unusual wheat situation mainly responsible).

In 1928 Canada's per capita foreign trade amounted to \$269 as compared with \$75 in U.S.A. In 1929, Canada's foreign trade per capita, \$256, again led the world.

Trade by Countries

(Calendar Year ending Dec. 31, 1929)

IMPORTS

Country	Thousand \$	P.C. of Total
United States.....	893,606	68
United Kingdom.....	194,776	15
Other Br. Empire.....	62,487	5
Germany.....	22,072	2
Japan.....	13,324	1
France.....	25,311	2
Other Countries.....	87,417	7
	1,298,993	100.0

EXPORTS

Country	Thousand \$	P.C. of Total
United States.....	522,586	44
United Kingdom.....	290,389	25
Other Br. Empire.....	105,092	9
Germany.....	32,393	3
Japan.....	37,505	3
France.....	16,943	1
Other Countries.....	177,504	15
	1,182,412	100.0

EXTERNAL TRADE OF CANADA 1894-1929

1894  \$ 224,756,000

1899  \$ 304,303,000

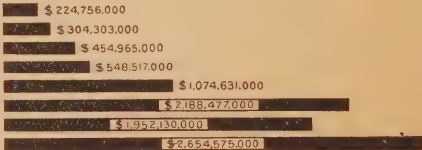
1904  \$ 454,965,000

1909  \$ 548,517,000

1914  \$ 1,074,631,000

1919  \$ 2,188,477,000

1924  \$ 1,952,130,000

1929  \$ 2,654,575,000

Trade by Products

	IMPORTS Thousand \$	EXPORTS Thousand \$
Agricultural and Vegetable.....	232,826	429,801
Animal.....	70,090	140,829
Fibres and Textile.....	198,929	9,472
Wood and Paper.....	62,820	292,601
Iron.....	342,480	90,102
Non-Ferrous Metal.....	90,686	148,164
Non-Metallic Mineral.....	185,922	29,720
Chemical.....	40,131	21,828
Miscellaneous.....	75,109	19,895
	1,298,993	1,182,412

Total exports including those of foreign origin, \$1,208,338,000.

FINANCES

Wealth of Canada—Officially estimated in 1927 at \$27,668,000,000 exclusive of undeveloped natural resources; Ontario 33.48% Quebec 27.36%; Saskatchewan 8.78%; per capita wealth \$2,907.

Investments, Canadian and Foreign—

	January 1, 1929	
	Est. foreign Inv. in Can. Thousand \$	Est. Can. Inv. abroad Thousand \$
Great Britain.....	2,197,682	95,917
United States.....	3,470,087	991,652
Other Countries.....	236,400	658,247
Total.....	5,904,169	1,745,816

Canadians own between 55 and 65 per cent of securities of all enterprises on Canadian soil. During 1928 new Canadian issues totalled \$720,000,000, which was subscribed as follows:—Canada, \$414,000,000; U.S., \$241,000,000; Great Britain, \$62,000,000; and other countries, \$3,000,000.

National Debt—Canada's net national debt, which increased from \$335,997,000 or \$43 a head in 1914 to \$2,453,777,000 or \$272 in 1923, was \$2,225,505,000 or \$227 a head on March 31, 1929.

Revenue and Expenditure—(1929-30). Total estimated revenue \$447,322,000, derived mainly from Customs and Excise duties (54.7%). Special War Taxes including Income and Sales taxes (30.0%). Total expenditure \$402,815,000; chief items, Post Office, National Defense, Public Works, National Revenue, etc., (32.0%); interest on National Debt (30.2%); Pensions, (10.0%); capital expenditures on Public Works, Railways and Canals (6.3%).

TRANSPORTATION AND COMMUNICATION

The length of eight great Canadian waterways are:
Mackenzie (with Peace, 1,065) 2,525 miles

St. Lawrence and Great Lakes, to head of Louis river	1,900 miles
Nelson (with South Saskatchewan, 1,205)	1,600 "
Churchill	1,000 "
Fraser	695 "
Ottawa	685 "
Yukon (in Canada)	655 "
Columbia (in Canada)	465 "

Canals—A series of canals under Federal Government control links up an inland navigation system from Montreal, the limit of ocean traffic on the St. Lawrence, to Port Arthur at the head of the Great Lakes, a distance of 1,215 miles. By the completion of the new Welland canal 953 miles of this route (from Port Arthur to Prescott) will be navigable by the largest lake freighters. The Welland Canal, between lakes Erie and Ontario, is 25 miles long, 200 ft. wide, 27½ ft. deep and comprises 8 locks. In open season, 1929, 92,617,000 tons freight passed through the Sault Ste. Marie canals, (Canadian and U.S.), nearly three times the tonnage passing through the Panama canal during the same year.

Canadian Government Merchant Marine—A fleet of 31 vessels operated on the principal trade routes of the world during 1929, 12 in West Indies service.

St. Lawrence Waterway Project—An international plan for the deepening of the St. Lawrence Waterways (1) to permit ocean-going vessels to enter the Great Lakes and (2) to develop hydro-electric energy. The joint Board of Engineers ap-

pointed by the two governments in 1924 on the recommendation of the International Joint Commission have suggested two alternative plans:

	Estimate of cost	H.P. Installed cap.
Single-stage development, as favoured by American section	\$394,000,000	2,730,300
Two-stage development, as favoured by Canadian section	423,600,000	2,619,000

Initial installation, 1,368,000 h.p., including all features required for navigation is estimated to cost \$350,000,000 for single-stage and \$386,000,000 for two-stage development. Ultimate development would amount to 5,000,000 h.p., at a cost of from \$620,000,000 to \$650,000,000, including navigation works.

Railways—Average mileage of road operated Jan. 1930, 41,186; Canadian National, 21,696 miles; Canadian Pacific, 14,814 miles; added during year 1,143 miles.

Recent railway extensions designed principally to further specific resources development include:

Agriculture—Several in Saskatchewan and Alberta, notably in Peace River district; Hudson Bay line to Churchill.

Forestry — Beaconsia to Pine Falls, Man.; Kapuskasing to Smoky Falls, N. Ontario; St. Felicien to Dolbeau, Lake St. John region, Que.

Mining — Extensions to Flin Flon and Sherritt Gordon, N. Manitoba; Rouyn, N. Quebec; Black Rapids, N. Ontario.

Motor Vehicles—Over 100 million dollars is invested in this Canadian industry. Production, 1929, 263,295 motor cars, a new record, (1927, 179,054 cars), imported 44,724; exported 102,302. Total registration in Canada, 1929, 1,194,000 motor cars, of which 1,014,000 were passenger cars; one vehicle for every 8.2 persons. The National Development Bureau supplies sectional road maps of Canada and Northern U.S.

Civil Government Air Operations—Headquarters at Ottawa. Stations at Ottawa, Winnipeg and High River (Alta.). Operations include detection and suppression of forest fires, aero photography, transportation and experimental work in the application of aircraft to civil needs. Photography is undertaken by eleven mobile photographic detachments which establish temporary bases in the areas to be photographed. Aircraft operated in 1929, 90.

Civil Aviation—Licensed commercial aircraft at end of 1929, 445; licensed aerodromes 77; firms manufacturing aircraft 6; firms chiefly operating aircraft, 81; total, 1929, flying mileage 6,284,000; freight carried, 3,904,000 lbs. In 1929, 23 flying clubs operated, using 65 planes, membership 5,233; 1928, 15 clubs, 2,403 members. Air mail service growing rapidly; 1929, contract mileage, 491,000, mail carried, 431,000 lbs. (1927, 14,684 lbs.); includes regular schedules between large cities and service to remote settlements such as Magdalen islands, Chibougamau, Red Lake and Aklavik.

Empire service airship mooring mast 205 ft. high, recently erected at St. Hubert, Quebec.

Telephones and Telegraphs—Canada, with 1,334,534 telephones installed in 1928, has 13.82 per 100 population, (U.S.A. 15.8); 3,983,000 miles of wire; 4,909 telegraph offices, wire mileage 337,971; 6 trans-oceanic cables, 5 Atlantic and 1 Pacific.

Radio—The Department of Marine and Fisheries administers the Radiotelegraph Act. On March 31, 1930, licensed stations operating in Canada and on ships registered therein, were 425,430, of which 424,146 were private receiving.

As aids to navigation the Department owns and operates 29 coast and land stations; 12 direction finding stations, 7 on the East Coast, 1 on the West Coast and 4 in Hudson Bay and strait; 15 radio beacon stations; 4 radiophone stations; 22 ship stations and 13 ship stations on behalf of other Government departments.

Trans-Atlantic and Trans-Pacific Radio Beam services are in operation between Montreal and England and Australia respectively.

NATIONAL DEFENCE

Royal Canadian Navy—Force authorized, 1930, 896 officers and men; R.C. Naval Reserve, 500 officers and men; R.C. Naval Volunteer Reserve, 1,000.

Ships—Destroyers "Champlain" and "Vancouver"; mine-sweepers "Festubert", "Ypres", "Thiepval" and "Armentieres". Naval training barracks and dockyards are maintained at Halifax, N.S., and Esquimalt, B.C. Two new destroyers of latest design are under construction in English shipyards, to be commissioned early in 1931.

Militia—The permanent active militia March 31, 1930, consisted of 15 units of all arms of the service, and had a strength of 401 officers and 3,090 men. The non-permanent active militia is made up of cavalry, artillery, machine gun, signalling,

infantry, and other corps. The Cadet Services, including the Boys' Naval Brigade, have an enrolment of 130,307 in 1930.

Royal Military College (Kingston, Ontario)—Trains about 195 cadets annually as officers for the Militia and other professions. Commissions in the British Army, Royal Air Force, Canadian Permanent Force and Royal Canadian Air Force are granted to R.M.C. graduates.

Royal Canadian Air Force—The chief training base is at Camp Borden, Ont. (for land flying) and at Vancouver, B.C. (for sea flying). Other Government stations are situated at Dartmouth, N.S., Victoria Beach (Man.) and High River (Alta.). Total personnel, March 31, 1930, 175 officers and 669 airmen.

Royal Canadian Mounted Police—The sole Federal Police Force in Canada, comprising, March 31, 1930, 56 officers and 1,169 other ranks. They maintain law and order in the vast Arctic and sub-Arctic regions of Canada and also render valuable services (suppression of narcotic drug traffic, counterfeiting, etc.) in settled parts of the country.

PUBLIC HEALTH

Sanitation and Hospitalization are functions of the Department of Health.

Sanitation service gives advice on home water supply, isolated sewage disposal, ventilation, pasteurization of milk, disinfection, mosquito control, etc.

Hospitalization supplies information on the planning and equipment of local hospitals, quarantine stations, etc. (A list of free publications may be had from the Department of Health, Ottawa.)

Victorian Order of Nurses—The V.O.N., founded under Royal Charter in 1897, had 300 nurses on duty in 75 districts throughout Canada in March, 1930. Their special work is bedside nursing and maternity cases, free of charge where warranted; but the order co-operates with all departmental and municipal bodies in bettering the national health by free practical instruction and personal advice.

Canadian Red Cross Society—While still busy in meeting the needs for service arising directly from the war, the Society is now organized to carry out a peace-time programme as outlined in Article XXV of the League of Nations, "for the improvement of health, the prevention of disease and the mitigation of suffering." Its activity is specially seen in Emergency Disaster Relief, nursing outposts and the enlisting of well over 100,000 Canadian children in the Junior Red Cross.

EDUCATION

Administration of public education assigned to provinces by British North America Act, 1867.

Attendance (1928) at elementary and secondary schools,.....	2,146,140
Attendance (1928) at technical and night schools,.....	140,349

Universities—23; registration, 1928, 56,042. Those with over 1,000 regular students were: Laval (Quebec); McGill and Montreal (Montreal); Queen's (Kingston); Toronto (Toronto); Manitoba (Winnipeg); Saskatchewan (Saskatoon); Alberta (Edmonton); British Columbia (Vancouver). Dalhousie (Halifax) had over 800 students and Mount Allison (Sackville) nearly 500.

GENERAL

Area—The Dominion of Canada embraces the northern half of North America, except Newfoundland, Labrador and Alaska. Area, 3,684,723 sq. miles, of which 3.73 per cent is water. It is greater in area than the United States with Alaska and comprises over 27 per cent of the total area of the British Empire.

The Six Natural Divisions—(1) Appalachian (Nova Scotia; New Brunswick; Prince Edward Island; south-east Quebec). (2) St. Lawrence lowlands (St. Lawrence valley, south Ontario). (3) Canadian shield (huge girdle about Hudson Bay), including remainder of Quebec; all Ontario north of peninsula; and north-east of line from Lake of the Woods through Manitoba, Saskatchewan, Alberta and Mackenzie district to Great Bear lake and Arctic ocean. (4) Interior plains (prairies and basin of Mackenzie and Athabaska rivers). (5) Cordilleran (all the mountainous country west of 4). (6) Arctic archipelago and Hudson Bay lowland.

Skyline—Highest elevations in the provinces are: Nova Scotia, North Cape Plateau, Cape Breton Island, 1,500 ft.; Prince Edward Island, Fredericton Station, 306 ft.; New Brunswick, Mount Carleton, 2,716 ft.; Quebec, Tabletop Mountain, 4,230 ft.; Ontario, Tip Top Hill, 2,120 ft.; Manitoba, Duck Mountain, 2,727 ft.; Saskatchewan, Cypress Hills, 4,544 ft.; Alberta, Mount Columbia, 12,294 ft.; British Columbia, Mt. Fairweather, 15,287 ft.; Yukon, Mt. Logan, 19,850 ft.

Distance—East to West from Strait of Belle Isle to Queen Charlotte islands, 3,185 miles. Least distance by rail from Atlantic to Pacific 3,368 miles.

CLIMATE OF CANADA

These observations cover long periods.

Province	Station	Highest Temp. (Fahr.) on record	Lowest Temp. (Fahr.) on record	Mean July Temp.	Mean January Temp.	Mean Annual Precipitation (rain & snow)	Mean yearly hours of sunshine.	Mean annual snowfall.
B.C.	Victoria	95	2	59.9	38.6	29.70	1957	14.8
B.C.	Kamloops	102	31	69.8	21.8	10.85	2091	34.1
Alta.	Medicine Hat	108	51	69.2	12.0	12.69	2303	35.4
Alta.	Edmonton	98	57	61.5	6.3	17.64	2145	45.6
Sask.	Regina	107	56	63.7	3.6	14.11	2000	24.4
Sask.	Prince Albert	96	70	62.8	4.6	15.88	—	46.1
Man.	Winnipeg	103	46	66.6	2.7	20.02	2122	49.9
Ont.	Ottawa	98	33	69.1	17.8	33.51	2014	97.1
Ont.	Toronto	103	26	68.1	22.1	33.46	2062	66.0
Ont.	Haileybury	102	48	66.0	6.4	29.73	1733	95.2
P.Q.	Montreal	96	27	69.6	13.3	41.16	1829	118.0
P.Q.	Quebec	97	34	65.6	9.8	41.25	1765	116.2
N.B.	Fredericton	96	35	66.0	13.0	42.78	1956	97.8
N.S.	Halifax	99	28	64.8	23.0	55.32	1875	77.1
P.E.I.	Charlottetown	92	23	65.8	18.2	38.83	1833	86.1
Y.T.	Dawson	95	68	59.3	22.4	12.49	—	56.7

* In computing precipitation ten inches of snow = one inch of rain.

The lowest temperature on record was at Good Hope, N.W.T. -79 deg. The highest was at Medicine Hat 108.2. The great northern loop of the summer isotherm of 55° Fahr., extending beyond Good Hope in Lat. 67° N., combines with the longer hours of daylight to extend the limit of crop cultivation in the north-west almost to the edge of the Arctic circle.

POPULATION

1921 Census—8,788,483; estimated, June 1, 1929, 9,797,000, an increase of 10.3% in 7 years. In 1921, 77.75 per cent were Canadian born, 12.12 British, 4.25 per cent U.S.A., others 5.88 per cent; by racial origin 55.4 per cent British; and 27.91 per cent French.

Religious Percentages (1921)—Roman Catholics, 38.57; Presbyterians, 16.04; Anglicans, 16.02; Methodists, 13.19; Baptists, 4.80; Lutherans, 3.26; Greek Orthodox, 1.93; Jews, 1.42; others, 4.77.

Percentage of Rural Population—in 1901, 62.5; 1911, 54.58; 1921, 50.48; 1930 less than 50. Birth rate (per 1,000) 1928, 24.5; marriages 7.7; deaths 11.3.

Immigration—	1928	1929
British.....	55,848	66,801
United States.....	29,933	31,852
Others preferred.....	30,739	29,968
Remainder.....	50,262	36,372
	166,782	164,993

The preferred class of immigrants, next to the British or American include, Belgian, Danish, Dutch, Finnish, French, German, Icelandic, Norwegian, Swedish and Swiss.

Cost of Living—The average weekly cost of a family budget of 29 staple foods for five persons in March, 1930, was \$11.67, as compared with \$7.96 in November, 1914, and \$16.92 (highest point reached) in June, 1920.

Employment—The Dominion and Provincial Governments co-operate in a national system of employment bureaus. There are 64 employment offices and 8 clearing houses at the service of employers and employees. When labour is in demand, the Employment Service of Canada, the Immigration Department and the British Labour Exchanges co-operate in such a way that the Canadian, as well as the incoming workman, is safe guarded.

League of Nations Society—Established in 1921, has headquarters in Ottawa and 22 permanent branches throughout Canada. President, H. M. Tory, D.Sc., LL.D., F.R.S.C.; Gen. Sec., Col. C. P. Meredith, 381 Wilbrod St., Ottawa. In 1927 Canada was elected to the Council of the League.

